

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-25 remain in the application. Claims 1, 8-13, and 23 have been amended.

In item 3 on pages 2-3 of the above-mentioned Office action, claims 1-2 and 6-8 have been rejected as being anticipated by Ogino et al. (US Pat. Applic. Pub. No. US 2002/0158343 A1) under 35 U.S.C. § 102(e).

In item 4 on pages 3-4 of the above-mentioned Office action, claim 9 has been rejected as being unpatentable over Ogino et al. in view of Horiuchi et al. (US Pat. No. 6,455,786 B1) under 35 U.S.C. § 103(a).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references. However, the language of claims 1 and 8-9 has been modified in an effort to even more clearly define the invention of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1 and 9 call for, inter alia:

a buffer having a protective layer of a mechanically damping material, said protective layer having a free surface, said buffer:

being disposed between said contact areas and above said semiconductor component structures; and

having a hard coating at said free surface of said protective layer, said hard coating forming a free surface of said buffer.

Claim 8 calls for, inter alia:

a buffer having a protective layer of a mechanically damping material, said protective layer having a free surface, said buffer:

being disposed between said contact areas and above said semiconductor component structures; and

having a mechanically protective coating at said free surface of said protective layer, said mechanically protective coating forming a free surface of said buffer.

The invention of the instant application provides a semiconductor chip which includes at least one buffer which enables the chip to be more reliably removed from the carrier tape without damaging the integrated circuit structures. The buffer of the invention of the instant application includes a mechanically damping layer on the surface of the chip which provides for the damping of the mechanical impulse of the

piercing tool as the chip is raised from the carrier tape. The buffer further includes an outer hard coating which provides a higher mechanical resistance of the buffer to the piercing tool. Contact areas and conductor tracks are not disposed on the buffer and the buffer is not a part of, or a support for, the rewiring structure and external contacts.

In contrast, Ogino et al. teach a device which includes an insulating substrate disposed on the center of the active surface of the semiconductor chip. The conductor tracks and contact surfaces including the solder balls, which provide the external electrical connections to the package, are disposed on the insulating substrate.

The substrate of Ogino et al. includes a foam core which allows moisture to escape more easily from the substrate. Ogino et al. do not disclose anywhere that the substrate is mechanically damping or that the substrate includes an outer layer which is hard or mechanically resistant.

Therefore, Ogino et al. fail to teach a buffer including a mechanically damping layer with a hard coating at the free surface and thus the semiconductor chip or wafer according to the invention of the instant application.

Ogino et al. fail to address the object of the invention of the instant application and provide no incentive for a person skilled in the art to provide a semiconductor chip which includes a buffer that provides no mechanical support for a rewiring structure. Ogino et al. also give a person skilled in the art no reason to provide a buffer having a mechanically damping layer with a hard outer coating.

Clearly, Ogino et al. fail to teach a semiconductor chip including a buffer having a protective layer of a mechanically damping material and having a hard or mechanically protective coating at the free surface of the buffer, as recited in claims 1 and 8-9 of the instant application.

Horiuchi et al. do not make up for the deficiencies of Ogino et.al.

Claims 1 and 8-9 are, therefore, believed to be patentable over the art and since claims 2-7 are dependent on claim 1, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-9 are solicited. Method claims 10-25 have been amended in accordance with the amendment of the product claims and rejoinder of method claims 10-25 is requested upon


allowance of product claims 1-9 under MPEP 821.04 ("if applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims which depend from or otherwise include all the limitations of the allowable product claim will be rejoined"). For this reason, the withdrawn claims have not been cancelled as suggested by the Examiner.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to 37 CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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